

RECEIVED

NOV 09 2001

1652

Paper NO. 13
DJS 11/14/01

TECH CENTER 1600/2900

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/308,080

DATE: 10/10/2001

TIME: 10:36:47

13

Input Set : A:\Nih271-1.app

Output Set: N:\CRF3\10102001\I308080.raw

SEQUENCE LISTING

ENTERED

4 (1) GENERAL INFORMATION:

6 (i) APPLICANT: Gonzalez, Frank J.
7 Fernandez-Salguero, Pedro9 (ii) TITLE OF INVENTION: Methods and Compositions for Detecting
10 Dihydropyrimidine Dehydrogenase Splicing Mutations

12 (iii) NUMBER OF SEQUENCES: 7

14 (iv) CORRESPONDENCE ADDRESS:

15 (A) ADDRESSEE: Townsend and Townsend and Crew LLP

16 (B) STREET: Two Embarcadero Center, Eighth Floor

17 (C) CITY: San Francisco

18 (D) STATE: California

19 (E) COUNTRY: USA

20 (F) ZIP: 94111-3834

22 (v) COMPUTER READABLE FORM:

23 (A) MEDIUM TYPE: Floppy disk

24 (B) COMPUTER: IBM PC compatible

25 (C) OPERATING SYSTEM: PC-DOS/MS-DOS

26 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

28 (vi) CURRENT APPLICATION DATA:

C--> 29 (A) APPLICATION NUMBER: US/09/308,080

C--> 30 (B) FILING DATE: 28-Oct-1999

31 (C) CLASSIFICATION:

37 (vii) PRIOR APPLICATION DATA:

34 (A) APPLICATION NUMBER: US 60/013,835

35 (B) FILING DATE: 20-MAR-1996

38 (A) APPLICATION NUMBER: WO PCT/US97/04269

39 (B) FILING DATE: 19-MAR-1997

41 (viii) ATTORNEY/AGENT INFORMATION:

42 (A) NAME: Weber, Kenneth A.

43 (B) REGISTRATION NUMBER: 31,677

44 (C) REFERENCE/DOCKET NUMBER: 015280-271100US

46 (ix) TELECOMMUNICATION INFORMATION:

47 (A) TELEPHONE: (415) 576-0200

48 (B) TELEFAX: (415) 576-0300

51 (2) INFORMATION FOR SEQ ID NO: 1:

53 (i) SEQUENCE CHARACTERISTICS:

54 (A) LENGTH: 861 base pairs

55 (B) TYPE: nucleic acid

56 (C) STRANDEDNESS: single

57 (D) TOPOLOGY: linear

59 (ii) MOLECULE TYPE: DNA (genomic)

62 (ix) FEATURE:

63 (A) NAME/KEY: CDS

64 (B) LOCATION: 269..433

65 (D) OTHER INFORMATION: /note= "dihydropyrimidine dehydrogenase

66 (DPD) gene region of splicing mutant

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/308,080

DATE: 10/10/2001
TIME: 10:36:47

Input Set : A:\Nih271-1.app
Output Set: N:\CRF3\10102001\I308080.raw

67 mRNA encoding amino acids 581-635"
69 (ix) FEATURE:
70 (A) NAME/KEY: mutation
71 (B) LOCATION: replace(434, "a")
72 (D) OTHER INFORMATION: /note= "G -> A mutation at 3' donor
73 splice junction consensus sequence
74 leading to loss of exon in DPD mRNA
75 and DPD deficiency"

76 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
77 TGTAAATGAA GATAAAATATT TTTGTTTTT CGCTGTTCTA AACCTAGGGT TACAAGAAGT 60
78 AATTATCTG GAGCTAACAA ATACTTATT TTACCTTTT ATTTGCAAGT AGTTATGTT 120
79 CAATTCTAAT TTAATGTATA TAAAGAAATTC CTCTGCAAAT ATGTGAGGAG GGACCTCATA 180
80 AAATATTGTC ATATGGAAAT GAGCAGATAA TAAAGATTAT AGCTTTCTT TGTCAAAAGG 240
81 AGACTCAATA TCTTTACTCT TTCATGAG GAC ATT GTG ACA AAT GTT TCC CCC 292
82 Asp Ile Val Thr Asn Val Ser Pro 1 5
83 ATA ATC ATC CGG GGA ACC ACC TCT GGC CCC ATG TAT GGC CCT GGA CAA 340
84 Ile Ile Ile Arg Gly Thr Ser Gly Pro Met Tyr Gly Pro Gly Gln
85 10 15 20
86 AGC TCC TTT CTG AAT ATT GAG CTC ATC AGT GAG AAA ACG GCT GCA TAT 388
87 Ser Ser Phe Leu Asn Ile Glu Leu Ile Ser Glu Lys Thr Ala Ala Tyr
88 25 30 35 40
89 TGG TGT CAA AGT GTC ACT GAA CTA AAG GCT GAC TTC CCA GAC AAC 433
90 Trp Cys Gln Ser Val Thr Glu Leu Lys Ala Asp Phe Pro Asp Asn
91 45 50 55
92 GTAAGTGTGA TAAAGATCTA AAACAAGAGA ATTGGCATAA GTTGGTGAAT GTTTATTTAA 493
93 ACATCCAATT CATAGGCTTA TAAATATTAA TGTGTATATT TTATCAACGA ATCTGCCAGT 553
94 TGCTTGCTG ATGCATAGAA AGATAAAAAA GAAAGAAAAG CTCAGAACT CATAAAACC 613
95 CACACAATGT GAAGCTCTGT TATAATGGG TGCCATGTAA GATGGAAGAA GTATCTACAT 673
96 AAGCAGAAGG AAGAGAAATG AAATACTCAT TTTATTGAGT TGGCCCCAC TGTATGTGGC 733
97 TGGTATTTAT GAAGGTGATG ACCCAGGAAG AAATTGTAAA CTATAAACCA CTCCAAATAT 793
98 AAACCCGAGG CAGAACGAGC ATATCTCCTA TGAAGCCTGT ATTTACTCAG TGGAAATAA 853
99 118 TTTATTAA 861
100 (2) INFORMATION FOR SEQ ID NO: 2:
101 (i) SEQUENCE CHARACTERISTICS:
102 (A) LENGTH: 55 amino acids
103 (B) TYPE: amino acid
104 (D) TOPOLOGY: linear
105 (ii) MOLECULE TYPE: protein
106 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
107 Asp Ile Val Thr Asn Val Ser Pro Ile Ile Arg Gly Thr Thr Ser
108 1 5 10 15
109 Gly Pro Met Tyr Gly Pro Gly Gln Ser Ser Phe Leu Asn Ile Glu Leu
110 20 25 30
111 Ile Ser Glu Lys Thr Ala Ala Tyr Trp Cys Gln Ser Val Thr Glu Leu
112 35 40 45
113 Lys Ala Asp Phe Pro Asp Asn
114 50 55
115 (2) INFORMATION FOR SEQ ID NO: 3:

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/308,080

DATE: 10/10/2001
TIME: 10:36:47

Input Set : A:\Nih271-1.app
Output Set: N:\CRF3\10102001\I308080.raw

147 (i) SEQUENCE CHARACTERISTICS:
148 (A) LENGTH: 22 base pairs
149 (B) TYPE: nucleic acid
150 (C) STRANDEDNESS: single
151 (D) TOPOLOGY: linear
W--> 153 (ii) MOLECULE TYPE: DNA
156 (ix) FEATURE:
157 (A) NAME/KEY: -
158 (B) LOCATION: 1..22
159 (D) OTHER INFORMATION: /note= "primer DELF1 (forward)"
162 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
164 TGCAAATATG TGAGGAGGGA CC 22
167 (2) INFORMATION FOR SEQ ID NO: 4:
169 (i) SEQUENCE CHARACTERISTICS:
170 (A) LENGTH: 22 base pairs
171 (B) TYPE: nucleic acid
172 (C) STRANDEDNESS: single
173 (D) TOPOLOGY: linear
W--> 175 (ii) MOLECULE TYPE: DNA
178 (ix) FEATURE:
179 (A) NAME/KEY: -
180 (B) LOCATION: 1..22
181 (D) OTHER INFORMATION: /note= "primer DELR1 (reverse)"
184 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
186 CAGCAAAGCA ACTGGCAGAT TC 22
189 (2) INFORMATION FOR SEQ ID NO: 5:
191 (i) SEQUENCE CHARACTERISTICS:
192 (A) LENGTH: 18 base pairs
193 (B) TYPE: nucleic acid
194 (C) STRANDEDNESS: single
195 (D) TOPOLOGY: linear
W--> 197 (ii) MOLECULE TYPE: DNA
200 (ix) FEATURE:
201 (A) NAME/KEY: -
202 (B) LOCATION: 1..18
203 (D) OTHER INFORMATION: /note= "primer DPD15F (forward)"
206 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
208 TTGTGACAAA TGTTTCCC 18
211 (2) INFORMATION FOR SEQ ID NO: 6:
213 (i) SEQUENCE CHARACTERISTICS:
214 (A) LENGTH: 24 base pairs
215 (B) TYPE: nucleic acid
216 (C) STRANDEDNESS: single
217 (D) TOPOLOGY: linear
W--> 219 (ii) MOLECULE TYPE: DNA
222 (ix) FEATURE:
223 (A) NAME/KEY: -
224 (B) LOCATION: 1..24
225 (D) OTHER INFORMATION: /note= "primer DPD15R (reverse)"

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/308,080

DATE: 10/10/2001
TIME: 10:36:47

Input Set : A:\Nih271-1.app
Output Set: N:\CRF3\10102001\I308080.raw

228 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
230 AGTCAGCCTT TAGTCAGTG ACAC 24
233 (2) INFORMATION FOR SEQ ID NO: 7:
235 (i) SEQUENCE CHARACTERISTICS:
236 (A) LENGTH: 856 base pairs
237 (B) TYPE: nucleic acid
238 (C) STRANDEDNESS: single
239 (D) TOPOLOGY: linear
W--> 241 (ii) MOLECULE TYPE: DNA
244 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
246 TGTTAATGAA GATAAATATT TTTATTTTG CGCTATTCTA AACCTAGAGT TACAAGAAGT 60
248 AATTATCTG GAGCTAACAA ATACTTTATT TTACCTTTT ATTTGCAAGT AGTTTATGTT 120
250 CAATTCTAAAT TTAATGTATA TTAAAAATTC CTCTGCAAAT ATGTGAGGAG GGACCTCATA 180
252 AAATATTGTC ATATGGAGAT GAGCAGATAA TAAAGATTAT AGCTTTCTT TGTCAAAAGG 240
254 AGACTCAATA TCTTTACTCT TTCACTCAGGA CATTGTGACA ATGTTTCCC CCATAATCAT 300
256 CCGGGGAACC ACCTCTGGCC CCATGTATGG CCCTGGACAA AGCTCCTTTC TGAATATTGA 360
258 GCTCATCAGT GAGAAAACGG CTGCATATTG GTGTCAAAGT GTCACTGAAC TAAAGGCTGA 420
260 CTTCCCAGAC AACGTAAGTG TGATAAAAAT CTAAAACAAG AGAATTGGCA TAAGTTGGTG 480
262 AATGTTTATT TAAACATCCA ATTCACTAGGC TTATAAATAT TAATGTGTAT ATTTTATCAA 540
264 AGAATCTGCC AGTTGCTTTG CTGATGCATA GAAAGATAAA AAAGAAAGAA AAGCTCAAGA 600
266 ACTCATAAAA ACCCACACAA TGTGAAGCTC GTTATAAATG GGTGCCATGT AAGATGGAAG 660
268 AAGTATCTAC ATAAGCAGAA GGAAGAGAAA TGAAATACTC AATTTATTGA GTTGGCCCCC 720
270 ACTGTATGTG GCTGGCATTG ATGAAGGTGA TGACCCAGGA AGAAATTGTC ACCTATAAAT 780
272 CATCCAAATA TCCCGAGGCA GAAGCAGCAT CTCTCCTATG AAGTCTGTAT TTATTCAGC 840
274 GGGAAATAAT TTATTA 856

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/308,080

DATE: 10/10/2001
TIME: 10:36:48

Input Set : A:\Nih271-1.app
Output Set: N:\CRF3\10102001\I308080.raw

L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:153 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=3
L:175 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=4
L:197 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=5
L:219 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=6
L:241 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=7